LOOKOUT PASS SKI AREA (PWSNO 1400067)
SOURCE WATER ASSESSMENT REPORT

March 10, 2003

State of Idaho
Department of Environmental Quality

SOURCE WATER ASSESSMENT FOR LOOKOUT PASS SKI AREA

Under the Federal Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. The Department of Environmental Quality is completing the assessments for all Idaho public drinking water systems. The assessment for your drinking water source is based on construction characteristics; a land use inventory inside the recharge zone delineated for your source; and water quality history.

The delineation process establishes the physical area around a water source that becomes the focal point of the assessment and source water protection activities. The recharge zones for springs were delineated like small watersheds upstream from the intake to the hydrologic boundary. The Lookout Pass Ski Area spring delineation was drawn on a 7.5 minute U.S. Geological Survey Map by tracing the ridge lines that define the watershed above the intake structure. The delineation encloses about 86 acres and lies almost entirely on the Montana side of the Idaho/Montana border.

This report, *Source Water Assessment for Lookout Pass Ski Area* describes factors used to assess susceptibility to contamination. The analysis relies on information from public water system file for Lookout Pass Ski Area and an inventory of potential sources of contamination identified through a Geographic Information System database search. The susceptibility analysis worksheet for Lookout Pass Ski Area is attached.

Taken into account with local knowledge and concerns, this assessment should be used as a planning tool to develop and implement appropriate protection measures for this system. **The results should <u>not</u> be used as an absolute measure of risk and are not intended to undermine the confidence in your water system.**

Construction. Lookout Pass Ski Area is adjacent to Interstate 90 where it crosses the Idaho/Montana state border 6 miles east of Mullan, Idaho. Springs located on the hillside east of the highway supply drinking water to 3 service connections in the lodge and caretaker's residence. The primary source, producing 2.5 to 4 gallons per minute, flows out of the mountainside, through a culvert passing under a forest road, and into a collection box. The collection box is constructed of concrete with a steel access hatch. Water from this source is exposed to the atmosphere and surface water influence. Pictures in the public water system file show plants and debris floating on the surface of water in the intake box. Part of the discharge from this spring bypasses the collection structure and forms a small stream. The second spring, located about 500 feet up hill from the primary source, produces 1 to 2 gallons per minute. The buried concrete collection box was constructed in 1983. This source may be ground water, but needs to be tested for possible surface water influence if it is to be used without filtration and disinfection.

Potential Contaminant Inventory. Undeveloped forest occupies the recharge zone delineated for the Lookout Pass Ski Area springs. A forest road crosses the delineation, and there is a radio tower on the ridge that defines the top of the watershed. The road is a potential source of turbidity. Other than microbial contaminants naturally present in the environment, no potential sources of pollution are documented inside the recharge zone.

Water Quality History. Lookout Pass Ski Area disinfects its water with chlorine. A cartridge filtration unit was installed in December 2002, bringing the system into compliance with the Surface Water Treatment Rule. Monthly testing for total coliform bacteria is required during the initial use period for the filter. In the interval from January 1998 through January 2003, one sample was positive for total coliform bacteria. The system had not been in use for several weeks prior to the test. Total coliform bacteria were absent when repeat samples were tested. Annual tests for nitrates show concentrations ranging from levels below detection limits to 0.061 mg/l. The Maximum Contaminant Level for nitrate is 10 mg/l.

Susceptibility to Contamination. An analysis of the Lookout Pass Ski Area springs incorporating information from the public water system file and the potential contaminant inventory, ranked the springs highly susceptible to microbial contamination, but at low risk relative to other classes of regulated contaminants. The complete susceptibility work sheet for your system is on page 6 of this report. Formulas used to compute final scores and susceptibility rankings are at the bottom of the worksheet.

Source Water Protection. This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

Continuing to operate and maintain the springs in compliance with the *Idaho Rules for Public Drinking Water Systems* is the best drinking water protection tool available to Lookout Pass Ski Area. There are a number of voluntary well protection measures Lookout Pass Ski Area should also consider. Working in cooperation with the Forest Service the system should do everything possible to restrict activity in the small watershed feeding the springs. Source water protection efforts should focus on preventing turbidity in the springs from surface water runoff or human activity in the watershed. Periodic inspections of the watershed to monitor changes due to human activity or natural processes need to be part of the protection program. In addition to turbidity sources the watershed inspector needs to look for signs of illegal dumping adjacent to the forest roads, or the presence of dead game animals near the springs.

Contingency planning for Lookout Pass Ski Area should include an emergency response plan. There is a simple fill-in-the-blanks form available on the DEQ website (www.deq.state.id.us/water/water1.htm) to guide systems through the emergency planning process.

Due to the fairly short time associated with the movement of water in a small, steep watershed, source water protection activities should be aimed at both short-term and long-term management strategies to counter any future contamination threats.

Assistance. Public water suppliers and users may call the following IDEQ offices with questions about this assessment and to request help with drinking water protection planning.

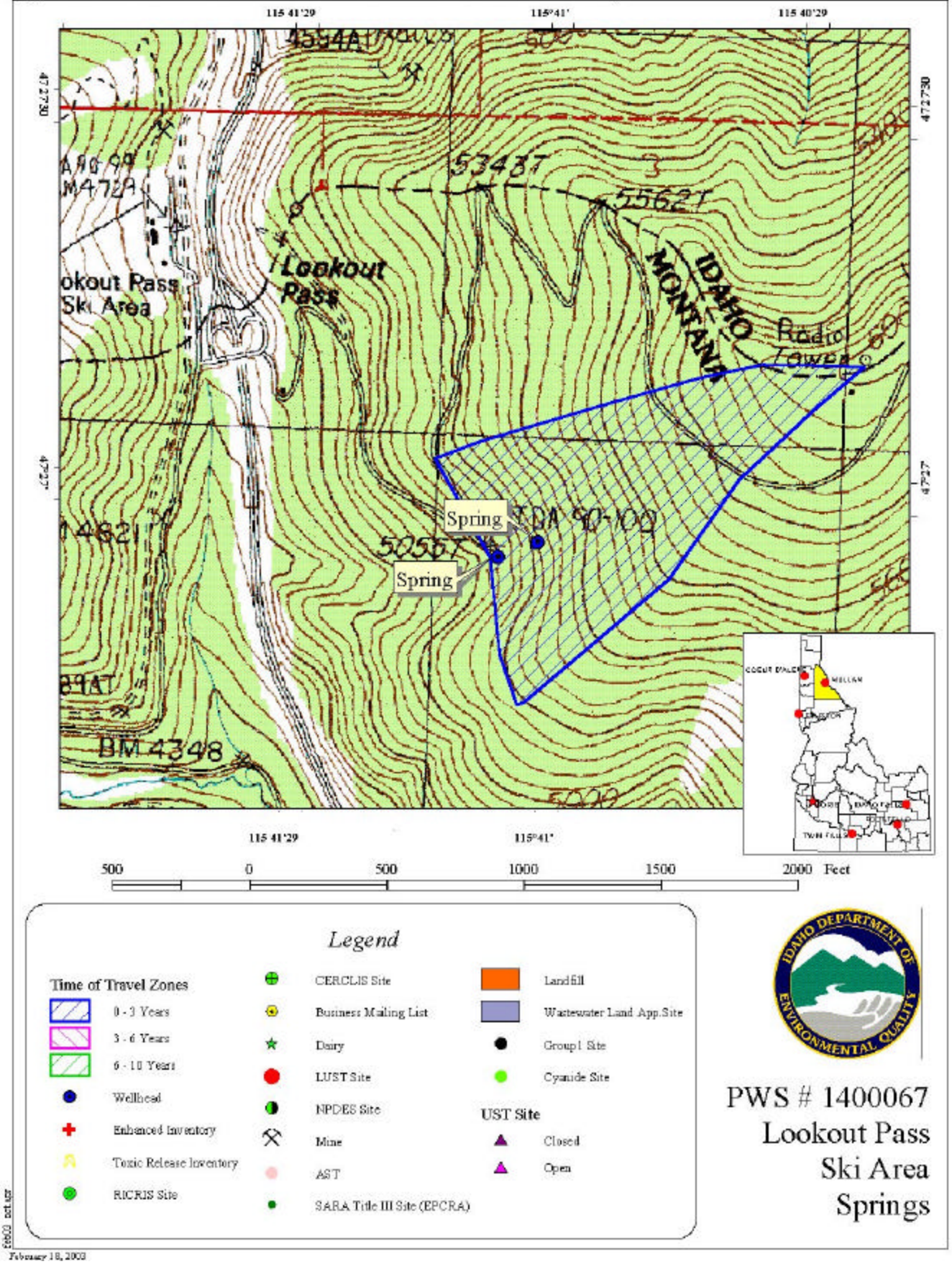
Coeur d'Alene Regional DEQ Office (208) 769-1422

State IDEQ Office (208) 373-0502

Website: http:// www.deq.state.id.us/water/water1.htm

Water suppliers serving fewer than 10,000 persons may contact Melinda Harper of the Idaho Rural Water Association (208) 343-7001 for assistance with drinking water protection strategies

Figure 1. Lookout Pass Ski Area Delineation and Potential Contaminant Inventory.



Surface Water Susceptibility Report

Public Water System Name : **LOOKOUT PASS SKI AREA** Source: **SPRING**
Public Water System Number : **1400067**
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1. System Construction		**Score**
Intake structure properly constructed	Allows entrance of surface water	1
Infiltration gallery	No	2
Total System Construction Score		**3**

2. Potential Contaminant Source / Land Use			**IOC Score**	**VOC Score**	**SOC Score**	**Microbial Score**
Predominant land use type (land use or cover)	Undeveloped forest		0	0	0	0
Farm chemical use high	NO		0	0	0	
Significant contaminant sources within 500 feet of spring	Naturally occurring microbial contaminants		0	0	0	*High
Sources of class II or III contaminants or microbials	NO		0	0	0	0
Agricultural lands within 500 feet	NO					
			0	0	0	0
Contaminant sources in watershed but more than 500' from spring	YES		0	0	0	0
Sources of turbidity in the watershed	YES	Forest road	1	1	1	1
Total Potential Contaminant Source / Land Use Score			**1**	**1**	**1**	**1**
3. Final Susceptibility Source Score			**4**	**4**	**4**	**4**
4. Final Source Ranking			Low	Low	Low	*High

The final scores for the susceptibility analysis were determined using the following formulas:

1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.27)

2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.35)

Final Susceptibility Ranking:

0 - 5 Low Susceptibility
6 - 12 Moderate Susceptibility
> 13 High Susceptibility

POTENTIAL CONTAMINANT INVENTORY
LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as Superfund is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.